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# FIG. 5

(SEQ ID NO: 4)

## Human Luteinizing Hormone (LH)

1                   8                   L1                   33  
SREPLRPWCHPINAILAVEKEGCPVCITVNTTICAGYCPTMMRVLQAVLP  
51                   58                   L3                   87  
PLPQVVCTYRDVRFESIRLPGCPRGVDPVVSFPVALSCRCGPCRRSTSDC  
101                   GGPKDHPLTCDHPQLSGLLFL

# FIG. 6

(SEQ ID NO: 5)

## Human Follicle Stimulating Hormone (FSH)

1                   4                   L1                   27  
NSCELTNITIAIEKEECRFCISINTTWCAGYCYTRDLVYKDPARPKitCT  
51                                   65                   L3                   81  
FKELVYETVRVPGCAHHADSLYTPVATQCHCGKCDSDSTDCTVRGLGPS  
101                   YCSFGEMKE

# FIG. 7

(SEQ ID NO: 6)

## Human Platelet-Derived Growth Factor-A (PDGF A-Chain)

1                   11                   L1                   36  
SIEEAVPAVCKTRTVIYEIPRSQVDPTSANFLIWPPCVEVKRCTGCCNTS  
51                   58                   L3                   88  
SVKCQPSRVHHRSVKVAKVEYVRKKPKLKEVQVRLEEHLECACATTSLNP  
101                   DYREEDTGRPRESGKKRKRRLKPT



*FIG. 8*  
(SEQ ID NO: 7)

17 42  
L1  
1 SLGSLTIAEPAMIAECKTRTEVFEISRRLIDRTNANFLVWPPCVEVQRCS

64 94  
L3  
51 GCCNNRNVQCRPTQVQLRPVQVRKIEIVRKKPIFKKATVTLEDHLACKCE

101 TVAAARPVTRSPGGSQEQRAKTPQTRVTIRTVRVRRPPKGKHRKFKHTHD

151 KTALKETLGA

FIG. 9  
(SEQ ID NO: 8)

1           APMAEGGGQNHHEVVKFMDVYQRSYCHPIETLVDIFQEYPDEIEYIFKPS  
   27  50  
    L1  
 51           CVPLMRCGGCCNDEGLECVPTESNITMQIMRIKPHQGQHIGEMSFLQHN  
   73  99  
    L3  
 101          KCECRPKKDRAEQEKSVRGKGKGQKRKRKKSRYKSWSPCGPCSERRKH  
 151          LFVQDPQTCKCCKNTDSRCKARQLELNERTCRCDKPRR



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# FIG. 10

(SEQ ID NO: 9)

## Human Nerve Growth Factor

1 SSSHPIFHRGEFSVCDSVSVWVGDKTTATDIKGKEVMVLGEVNNINSVFK  
51 QYFFETKCRDPNPVDSGCRGIDSKHWNSYCTTTHTFVKAMLTGKQAAWR  
101 FIRIDTACVCLSRKAVRRA

Diagram showing domain structure for Human Nerve Growth Factor (FIG. 10):  
- L1 domain: residues 16 to 57  
- L3 domain: residues 81 to 107

# FIG. 11

(SEQ ID NO: 10)

## Human Brain Derived Neurotrophic Factor

1 HSDPARRGELSVCDSEWVTAADKKTAVDMSGGTVTVLEKVSPVKGQLK  
51 QYFYETKCNPMGYTKEGCRGIDKRHWNSQCRTTQSYVRAMLTDSSKRIGW  
101 RFIRIDTSCVCILTIKGR

Diagram showing domain structure for Human Brain Derived Neurotrophic Factor (FIG. 11):  
- L1 domain: residues 14 to 57  
- L3 domain: residues 81 to 108

FIG. 10



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## FIG. 12

(SEQ ID NO: 11)

### Human Neurotrophin (NT)-3

1 YAEHKSHRGEYSVCDSESLWVTDKSSAIDIRGHQVTVLGEIGKTNSPVKQ  
51 YFYETRCKEARPVKNGCRGIDDRHWN SQCKTSQTYVRASLTENNKLVGWR  
101 WIRIDTSCVCALSRKIGRT

The diagram shows the sequence of Human Neurotrophin (NT)-3. It consists of three lines of text. The first line starts at position 1 and ends at position 15, with a bracket above it labeled 'L1'. The second line starts at position 51 and ends at position 80, with a bracket above it labeled 'L3'. The third line starts at position 101 and ends at position 107, with a bracket above it labeled 'L5'.

## FIG. 13

(SEQ ID NO: 12)

### Human Neurotrophin (NT)-4

1 GVSETAPASRRGELAVCDAVSGWVTD RRTAVDLRGREVEVLGEVPAAGGS  
51 PLRQYFFETRCKADNAEEGGPGAGGGGCRGVDRRHVWSECKAKQSYVRAL  
101 TADAQGRVGWRWIRIDTACVCTLLSRTGRA

The diagram shows the sequence of Human Neurotrophin (NT)-4. It consists of three lines of text. The first line starts at position 1 and ends at position 18, with a bracket above it labeled 'L1'. The second line starts at position 51 and ends at position 91, with a bracket above it labeled 'L3'. The third line starts at position 101 and ends at position 118, with a bracket above it labeled 'L8'.

## FIG. 14

(SEQ ID NO: 13)

### Human Transforming Growth Factor (TGF)- $\beta$ 1

1 ALDTNYCFSSTEKNCCVRQLYIDFRKDLGWKWIHEPKGYHANFCLGPCPY  
51 IWSLDTQYSKVLALYNQHNP GASAAPCCVPQALEPLPIVYVGRKPKVEQ  
101 LSNMIVRSCKCS

The diagram shows the sequence of Human Transforming Growth Factor (TGF)- $\beta$ 1. It consists of three lines of text. The first line starts at position 1 and ends at position 40, with a bracket above it labeled 'L1'. The second line starts at position 51 and ends at position 82, with a bracket above it labeled 'L3'. The third line starts at position 101 and ends at position 102, with a bracket above it labeled 'L8'.

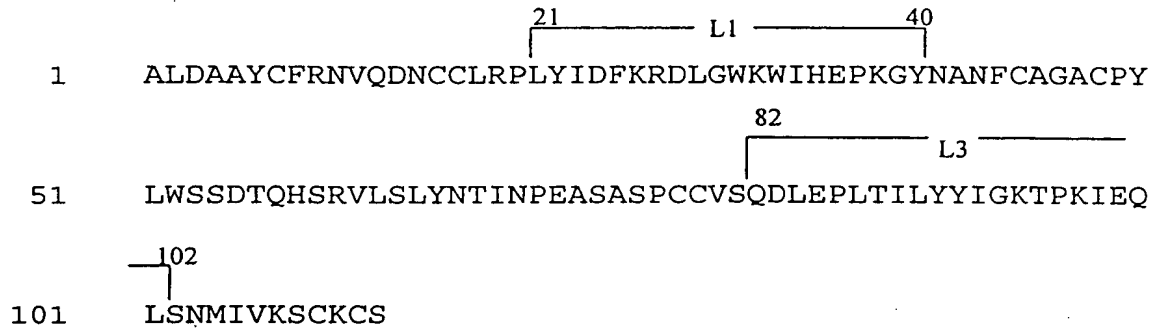


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## FIG. 15

(SEQ ID NO: 14)

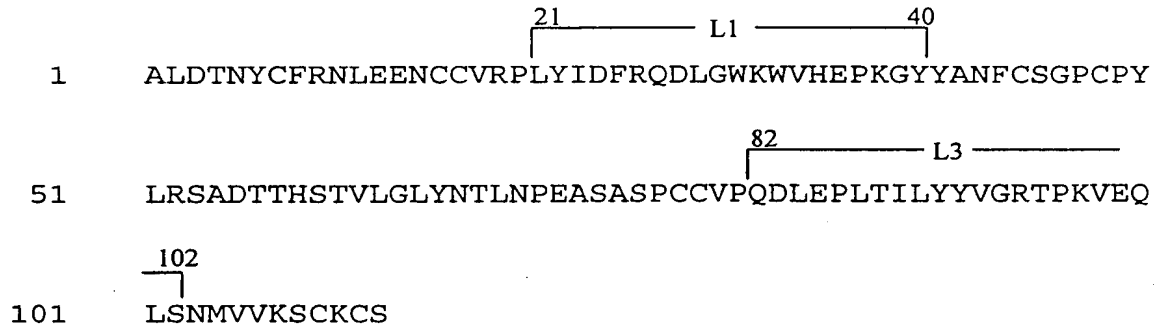
### Human Transforming Growth Factor (TGF)- $\beta$ 2



## FIG. 16

(SEQ ID NO: 15)

### Human Transforming Growth Factor (TGF)- $\beta$ 3





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# FIG. 17

(SEQ ID NO: 16)

## Human Transforming Growth Factor (TGF)- $\beta$ 4

1 MWPLWLCWAL WVLPLAGPGA ALTEEQLLAS LLRQLQLSEV PVLDRADMEK  
51 LVIPAHVRAQ YVLLRRDGD RSRGKRFSQS FREVAGRFLA SEASTHLLVF  
101 GMEQRLPPNS ELVQAVLRLF QEPVPQGALH RHGRLSPAAP KARVTVEWLV  
151 RDDGSNRTSL IDSRLVSVHE SGWKAFDVTE AVNFWQQLSR PPEPLLQVS  
201 VQREHLGPLA SGAHKLVRFA SQGAPAGLGE PQLELHTLDL RYGAQGD CD  
251 PEAPMTEGTR CCRQEMYIDL QGMKWAKNWV LEPPGFLAYE CVGTCQQPPE  
301 ALAFNWPFLG PRQCIASETA SLPMIVSIKE GGRTRPOVVS LPNMRVQKCS  
351 CASDGALVPR RLQHRPWCIH

# FIG. 18

(SEQ ID NO: 17)

## Human Neurturin

1 MQRWKAAALA SVLCSSVLSI WMCREGLLS HRLGPALVPL HRLPRTL DAR  
51 IARLAQYRAL LQGAPDAMEL RELTPWAGRP PGPRRRAGPR RRRARARLGA  
101 RPCGLRELEV RVSELGLGYA SDETVLFRYC AGACEAAARV YDLGLRRLRQ  
151 RRRLRRERVR AQPCCRPTAY EDEVSFLEDAH SRYHTVHEL ARECACV

FIG. 17



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# FIG. 19

(SEQ ID NO: 18)

## Human Inhibin $\alpha$ (Common to Inhibin A and Inhibin B)

1 MVLHLLLFLL LTPQGGHSCQ GLELARELVL AKVRALFLDA LGPPAVTREG  
51 GDPGVRRLLPR RHALGGFTHR GSEPEEEEDV SQAILFPATD ASCEDKSAAR  
101 GLAQEAEEGL FRYMFRPSQH TRSRQVTSQAQ LWFHTGLDRQ GTAASNSSEP  
151 LLGLLALSPG GPVAVPMSLG HAPPHWAVLH LATSALSLLT HPVLVLLLRRC  
201 PLCTCSARPE ATPFLVAHTR TRPPSGGERA RRSTPLMSWP WSPSALRLLQ  
251 RPPEEPAAHA NCHRVALNIS FQELGWERWI VYPPSFIFHY CHGGCGLHIP  
301 PNLSLPVPGA PPTPAQPYSL LPGAQPCCAA LPGTMRPLHV RTTSDGGYSF  
351 KYETVPNLLT QHCACI

# FIG. 20

(SEQ ID NO: 19)

## Human Inhibin A - $\beta$ Subunit ( $\alpha$ - $\beta$ A Heterodimer)

1 MPLLWLRGFL LASCWIIIRS SPTPGSEGHS AAPDCPSCAL AALPKDVPNS  
51 QPEMVEAVKK HILNMLHLKK RPDVTQPVPK AALLNAIRKL HVGKVGGENGY  
101 VEIEDDIGRR AEMNELMEQT SEIITFAESG TARKTLHFEI SKEGSDLSV  
151 ERAEVWLFLK VPKANRTRTK VTIRLFQQQK HPQGSLDTGE EAEVGLKGE  
201 RSELLLSEKV VDARKSTWHV FPVSSSIQRL LDQ GKSSLDV RIACEQCQES  
251 GASLVLLGKK KKKEEEGEGK KKG GEGGAG ADEEKEQSHR PFLMLQARQS  
301 EDHPHRRRRR GLECDGKVNI CCKKQFFVSF KDIGWNDWII APSGYHANYC  
351 EGECPSHIAG TSGSSLSFHS TVINHYRMRG HSPFANLKSC CVPTKLRPMS  
401 MLYYDDGONI IKKDIQNMIV EECGCS



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## FIG. 21

(SEQ ID NO: 20)

### Human Inhibin B - $\beta$ Subunit ( $\alpha$ - $\beta$ B Heterodimer)

1 MDGLPGRALG AACLLLLAAG WLGPEAWGSP TPPPTPAAPP PPPPPGSPGG  
51 SQDTCTSCGG FRRPEELGRV DGDFLEAVKR HILSRLQMRG RPNITHAVPK  
101 AAMVTALRKL HAGKVREDGR VEIPHLDGHA SPGADGQERV SEIISFAETD  
151 GLASSRVRLY FFISNEGNQN LFVVQASLWL YLKLLPYVLE KGSRRKVRVK  
201 VYFQEQGHGD RWNMVEKRVD LKRSGWHTFP LTEAIQALFE RGERRLNLDV  
251 QCDSQCQLAV VPVFVDPGEE SHRPFVVVQA RLGDSRHRIR KRGLECDGRT  
301 NLCCRQOFFI DFRLIGWNDW IIAPTGY YGN YCEGSCPAYL AGVPGSASSF  
351 HTAVVNQYRM RGLNPGTVNS CCIPTKLSTM SMLYFDDEYN IVKRDVPNMI  
401 VEECGCA

## FIG. 22

(SEQ ID NO: 21)

### Human Activin A ( $\beta$ A Homodimer)

1 MPLLWLRGFL LASCWIIVRS SPTPGSEGHs AAPDCPSCAL AALPKDVPNS  
51 QPEMVEAVKK HILNMLHLKK RPDVTQPVPK AALLNAIRKL HVGKVGGENGY  
101 VEIEDDIGRR AEMNELMEQT SEIITFAESG TARKTLHFEI SKEGSDLSVV  
151 ERAEVWLFLK VPKANRTRTK VTIRLFQQQK HPQGSOLDTGE EAEEVGLKGE  
201 RSELLLSEKV VDARKSTWHV FVSSSIQRL LDQ GKSSLDV RIACEQCQES  
251 GASLVLLGKK KKKEEEGEGK KKG GEGGAG ADEEKEQSHR PFLMLQARQS  
301 EDHPHRRRRR GLECDGKVNI CCKKQFFVSF KDIGWNDWII APSGYHANYC  
351 EGECPSHIAG TSGSSLSFHS TVINHYMRG HSPFANLKSC CVPTKLRPMS  
401 MLYYDDGQNI IKKDIONMIV EECGCS

"BEEB" 0000



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## FIG. 23

(SEQ ID NO: 22)

### Human Activin B ( $\beta$ B Homodimer)

1 MDGLPGRALG AACLLLLAAG WLGPEAWGSP TPPPTPAAPP PPPPPGSPGG  
51 SQDTCTSCGG FRRPEELGRV DGDFLEAVKR HILSRLQMRG RPNITHAVPK  
101 AAMVTALRKL HAGKVREDGR VEIPHLDGHA SPGADGQERV SEIISFAETD  
151 GLASSRVRLY FFISNEGNQN LFVVQASLWL YLKLLPYVLE KGSRRKVRVK  
201 VYFQEQGHGD RWNMVEKRVD LKRSGWHTFP LTEAIQALFE RGERRLNLDV  
251 QCDSCQELAV VPVFVDPGEE SHRPFVVVQA RLGDSRHRIR KRGLECDGRT  
301 NLCCRQOFFI DFRLIGWNDW IIAPTGYYGN YCEGSCPAYL AGVPGSASSF  
351 HTAVVNQYRM RGLNPGTVNS CCIPTKLSTM SMLYFDDEYN IVKRDVPNMI  
401 VEECGCA

## FIG. 24

(SEQ ID NO: 23)

### Human Müllerian Inhibitory Substance (MIS)

1 MRDLPLTSLA LVLSALGALL GTEALRAEEP AVGTSGLIFR EDLDWPPGIP  
51 QEPLCLVALG GDSNGSSSPL RVVGALSAYE QAFLGAVQRA RWGPRDLATF  
101 GVCNTGDRQA ALPSLRRLGA WLRDPGGQRL VVLHLEEVTV EPTPSLRFQE  
151 PPPGGAGPPE LALLVLYPGP GPEVTVTRAG LPGAQSLCPS RDTRYLVLA  
201 DRPAGAWRGS GLALTQPRG EDSRLSTARL QALLFGDDHR CFTRMTPALL  
251 LLPRSEPAPL PAHGQLDTPV FPPPRPSAEL EESPPSADPF LETLTRLVRA  
301 LRVPPARASA PRLALDPDAL AGFPQGLVNL SDPAALERLL DGEEPLLLLL  
351 RPTAATTGDP APLHDPTSAP WATALARRVA AELQAAAEL RSLPGLPPAT  
401 APLLARLLAL CPGGPGGLGD PLRALLLLKA LQGLRVEWRG RDPRGPGRAQ  
451 RSAGATAADG PCALRELSVD LRAERSVLIP ETYQANNCQG VCGWPQSDRN  
501 PRYGNHVLL LKMQARGAAL ARPPCCVPTA YAGKLLISLS EERISAHVVP  
551 NMVATECGCR



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## FIG. 25

(SEQ ID NO: 24)

### Human Bone Morphogenic Protein (BMP)-2

1 MVAGTRCLLA LLLPQVLLGG AAGLVPELGR RKFAAASSGR PSSQPSDEVL  
51 SEFELRLLSM FGLKQRPTPS RDAVVPPYML DLYRRHSGQP GSPAPDHRLE  
101 RAASRANTVR SFHHEESLEE LPETSGKTTR RFFFNLSIP TEEFITSael  
151 QVFREQMQDA LGNNSSFHHR INIYEIIKPA TANSKFPVTR LLDTRLVNQN  
201 ASRWESFDVT PAVMRWTAQG HANHGfVVEV AHLEEKQGVs KRHVRIrSL  
251 HQDEHSWSQI RPLLVTFGHD GKGHPLHKRE KRQAKHKQRK RLKSSCKRHP  
301 LYVDFSDVGW NDWIVAPPGY HAFYCHGECp FPLADHLNST NHAIVQTLVN  
351 SVNSKIPKAC CVPTELSAIS MLYLDENEKV VLKNYQDMVv EGCGCR

## FIG. 26

(SEQ ID NO: 25)

### Human Bone Morphogenic Protein (BMP)-3

1 MAGASRLLFL WLGCFCVSLA QGERPKPPFP ELRKAVPGDR TAGGGPDSEL  
51 QPQDKVSEHM LRLYDRYSTV QAARTPGSLE GGSQPWRPRL LREGNTVRSF  
101 RAAAAETLER KGLYIFNLTS LTKSENILSA TLYFCIGELG NISLSCPVSG  
151 GCSHHAQRKH IQIDLSAWTL KFSRNQSOLL GHLSVDMAKS HRDIMSWLSK  
201 DITQFLRKAK ENEEFLLGFN ITSKGRQLPK RRLPFPEPYI LVYANDAAIS  
251 EPESVSSSLQ GHRNFPTGTv PKWDShIRAA LSIERRKKRS TGVLLPLQNN  
301 ELPGAeyQYK KDEVWEERKP YKTLQAQAPe KSKNKKKQRK GPHRKSQTLQ  
351 FDEQTLKKAR RKQWIEPRNC ARRYLKVDFA DIGWSEWIIS PKSFDAyyCS  
401 GACQFPMPKS LKPSNHATIQ SIVRAVGvVP GIPEPCCVPe KMSSLSILFF  
451 DENKNVVLKV YPNMTVESCA CR



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## FIG. 27

(SEQ ID NO: 26)

### Human Bone Morphogenic Protein (BMP)-3b

1 MAHVPARTSP GPGPQLLLLL LPLFLLLLRD VAGSHRAPAW SALPAAADGL  
51 QGDRDLQRHP GDAAATLGPS AQDMVAVMH RLYEKYSRQG ARPGGGNTVR  
101 SFRARLEVVD QKAVYFFNLT SMQDSEMILT ATFFHYSEPP RWPRALEVLC  
151 KPRAKNASGR PLPLGPPTRO HLLFRSLSON TATQGLLRGA MALAPPPRGL  
201 WQAKDISPIV KAARRDGELL LSAQLDSEER DPGVPRPSPY APYILVYAND  
251 LAISEPNSVA VTLQRYDPFP AGDPEPRAAP NNSADPRVRR AAQATGPLQD  
301 NELPGLDERP PRAHAQHFK HQLWPSPFRA LKPRPGRKDR RKKGQEVFMA  
351 ASQVLDFDEK TMQKARRKQW DEPRVCSRRY LKVDFADIGW NEWIISPKSF  
401 DAYYCAGACE FMPKIVRPS NHATIQSIVR AVGIIPGIPE PCCVPDKMNS  
451 LGVLFLENR NVVLKVYPNM SVDTCACR

## FIG. 28

(SEQ ID NO: 27)

### Human Bone Morphogenic Protein (BMP)-4

1 MIPGNRMLMV VLLCQVLLGG ASHASLIPET GKKKVAEIQG HAGGRRSGQS  
51 HELLRDFEAT LLQMFGLERR PPSKSAVIP DYMRDLRLQ SGEEEEEQIH  
101 STGLEYPERP ASRANTVRSF HHEEHLENIP GTSENSAFRF LFNLSIPEN  
151 EAISSAELRL FREQVDQGPD WERGFHRINI YEVMKPPAEV VPGHLITRLL  
201 DTRLVHHNVT RWETFDVSPA VLRWTREKQP NYGLAIEVTH LHQTRTHQGQ  
251 HVRISRSLPQ GSGNWAQLRP LLVTFGHDGR GHALTRRRRA KRSPKHHSQR  
301 ARKKKNKNCRR HSLYVDFSDV GWNDWIVAPP GYQAFYCHGD CPFPLADHLN  
351 STNHAIVQTL VNSVNSSIPK ACCVPTLSA ISMLYLDEYD KVVLLKNYQEM  
401 VVEGCGCR



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## FIG. 29

(SEQ ID NO: 28)

### Human Bone Morphogenetic Protein (BMP)-5 Precursor

1 MHLTVFLLKG IVGFLWSCWV LVGYAKGGLG DNHVHSSFIY RRLRNHERRE  
51 IQREILSILG LPHRPRPFSP GKQASSAPLF MLDLYNAMTN EENPEESEYS  
101 VRASLAEETR GARKGYASP NGYPRRIQLS RTTPLTTQSP PLASLHDTNF  
151 LNDADMVMSF VNLVERDKDF SHQRRHYKEF RFDLTQIPHG EAVTAAEFRI  
201 YKDRSNNRFE NETIKISIQ IIKEYTNRDA DLFLLDTRKA QALDVGWLVF  
251 DITVTSNHVW INPQNNLGLQ LCAETGDGRS INVKSAGLVG RQGPQSKQPF  
301 MVAFFKASEV LLRSVRAANK RKNQNRNKSS SHQDSSRMSS VGDYNTSEQK  
351 QACKKHELYV SFRDLGWQDW IIAPEGYAAF YCDGECSFPL NAHMNATNHA  
401 IVQTLVHLMF PDHVPKPCCA PTKLN~~NAISVL~~ YFDDSSNVIL KKYRNMVVRS  
451 CGCH

## FIG. 30

(SEQ ID NO: 29)

### Human Bone Morphogenetic Protein (BMP)-6/Vgrl

1 SSASDYNSELKTACRKHELYV<sup>21</sup>SFQDLGW<sup>40</sup>q<sup>L1</sup>IIAPKGYAANYCDGECSPP  
51 LNAhtNHAIVQTLVHLMNPEYVPKPCCAPT<sup>81</sup>TKLN<sup>L3</sup>NAISVLYFDDNSNVikKY  
101 <sup>102</sup>RNMVVRACGCH



(SEQ ID NO: 30)

1 ANVAENSSSDQRQACKKHELYVSFRDLGWQWIIAPEGYAAYYCEGECAFP  
 21 L1 40  
 51 LNSATNHAIVQTLVHFINPETVPKPCCAPTQLNAISVLYFDDSSNVIKKY  
 81 L3  
 102  
 101 RNMVVRACGCH

(SEQ ID NO: 31)

```

1      MTALPGPLWL  LGLALCALGG  GPGGLRPPPG  CPQRRLGARE  RRDVQREILA

51     VLGLPGRPRP  RAPPAASRLP  ASAPLFMLDL  YHAMAGDDDE  DGAPAERRLG

101    RADLVMSFVN  MVERDRALGH  QEPHWKEFRF  DLTQIPAGEA  VTAAEFRIYK

151    VPSIHLNRT  LHVSMFQVVQ  EQSNRESDLF  FLDLQTLRAG  DEGWLVLDDVT

201    AASDCWLLKR  HKDLGLRLYV  ETEDGHSVDP  GLAGLLGQRA  PRSQQPFFVT

251    FFRASPSPIR  TPRAVRPLRR  RQPKKSNELP  QANRLPGIFD  DVHGSHGRQV

301    CRRHELYVSF  QDLGWLDWVI  APQGYSAYYC  EGECSFPLDS  CMNATNHAIL

351    QSLVHLMKPN  AVPKACCAPT  KLSATSVLYY  DSSNNVILRK  HRNMVVKACG

401    CH

```

[illegible]



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## FIG. 33

(SEQ ID NO: 32)

### Human Bone Morphogenic Protein (BMP)-10

1 MGSLVLTLCALFCLAAYLVS GSPIMNLEQS PLEEDMSLFG DVFSEQDGVD  
51 FNTLLQSMKD EFLKTLNLS IPTQDSAKVD PPEYMLELYN KFATDRTSMP  
101 SANIIRSFKN EDLFSQPVSF NGLRKYPLLF NVSIPHHEEV IMAELRLYTL  
151 VQRDRMIYDG VDRKITIFEV LESKGDNEGE RNMLVLVSGE IYGTNSEWET  
201 FDVTDAIRRW QKSGSSTHQL EVHIESKHDE AEDASSGRLE IDTSAQNKHN  
251 PLLIVFSDDQ SSDKERKEEL NEMISHEQLP ELDNLGLDSF SSGPGEEALL  
301 QMRSNIIYDS TARIRRNAKG NYCKRTPLYI DFKEIGWDSW IIAPPGYEAY  
351 ECRGVCNYPL AEHLTPTKHA IIQALVHLKN SQKASKACCV PTKLEPISIL  
401 YLDKGVVTYK FKYEGMAVSE CGCR

## FIG. 34

(SEQ ID NO: 33)

### Human Bone Morphogenic Protein (BMP)-11

1 MVLAAPLLLG FLLLALELRP RGEAAEGPAA AAAAAAAAAA AGVGGERSR  
51 PAPSVAPEPD GCPVCVWRQH SRELRLSEIK SQILSKLRLK EAPNISREVV  
101 KQLLPKAPPL QQILDLDHDFQ GDALQPEDFL EEDEYHATTE TVISMAQETD  
151 PAVQTDGSPL CCHFHFSPKV MFTKVLKAQL WVYLRPVPRP ATVYLQILRL  
201 KPLTGEGTAG GGGGRRHIR IRSLKIELHS RSGHWQSIDF KQVLHSWFRQ  
251 PQSNWGIEIN AFDPSGTDLA VTSLGPGAEG LHPFMELRVL ENTKRSRRNL  
301 GLDCDEHSSE SRCCRYPLTV DFAFGWDWI IAPKRYKANY CSGQCEYMF  
351 QKYPHTHLVQ QANPRGSAGP CCTPTKMSPI NMLYFNDKQQ IIYGKIPGMV  
401 VDRCGCS

FIG. 33



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## ***FIG.35***

(SEQ ID NO: 34)

### **I. HUMAN BONE MORPHOGENIC PROTEIN (BMP)-15**

1 MVLLSILRIL FLCELVLFME HRAQMAEGGQ SFIALLAEAP TLPLIEEMLE  
51 ESPGEQPRKP RLLGHSLRYM LELYRRSADS HGHPRENRTI GATMVRLVKP  
101 LTSVARPHRG TWHIQILGFP LRPNRGLYQL VRATVVYRHH LQLTRFNLSC  
151 HVEPWVQKNP TNHFPSSSEG DSSKPSLMSNA WKEMDITQLV QQRFWNNKGH  
201 RILRLRFMCQ QQKDSGGLEL WHGTSSLDIA FLLLYFNDTH KSIRKAKFLP  
251 RGMEEFMERE SLLRRTRQAD GISA EVTASS SKHSGPENNQ CSLHPFQISE  
301 RQLGWDHWII APPFYTPNYC KGTCLRVLRD GLNSPNHAI QNLINQLVDQ  
351 SVPRPSCVPY KYVPISVLMI EANGSILYKE YEGMIAESCT CR

## ***FIG.36***

(SEQ ID NO: 35)

### **Human Norrie Disease Protein (NDP)**

**[Norrin]**

1 MRKHVLAASF SMLSLLVIMG DTDSKTDSSF IMDS DPRRCM RHHYVDSISH  
51 PLYKCSSKMV LLARCEGHCS QASRSEPLVS FSTVLKQPFR SSCHCCRPQT  
101 SKLKALRLRC SGGMRLTATY RYILSCHCEE CNS



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## FIG. 37

(SEQ ID NO: 36)

### Human Growth Differentiation Factor (GDF)-1

1 MPPPQQGPCG HLLLLLLALL LPSLPLTRAP VPPGPAAALL QALGLRDEPQ  
51 GAPRLRPVPP VMWRLFRRRD PQETRSGSRR TSPGVTLQPC HVEELGVAGN  
101 IVRHIPDRGA PTRASEPVSA AGHCPWTVV FDLSAVEPAE RPSRARLELR  
151 FAAAAAAPE GGWELSVAQA GQGAGADPGP VLLRQLVPAL GPPVRAELLG  
201 AAWARNASWP RSLRLALALR PRAPAACARL AEASLLLVTL DPRLCHPLAR  
251 PRRDAEPVLG GPGGACRAR RLYVSFREVG WHRWVIAPRG FLANYCQGQC  
301 ALPVALSGSG GPPALNHA VL RALMHAAAPG AADLPCCVPA RLSPISVLFF  
351 DNSDNVVLRO YEDMVVDECG CR

## FIG. 38

(SEQ ID NO: 37)

### Human Growth Differentiation Factor (GDF)-5 Precursor

1 MRLPKLLTFL LWYLAWLDLE FICTVLGAPD LGQRPQGSRP GLAKAEAKER  
51 PPLARNVFRP GGHSYGGGAT NANARAKGGT GQTGGLTQPK KDEPKKLPPR  
101 PGGPEPKPGH PPQTRQATAR TVTPKGQLPG GKAPPKAGSV PSSFLLKKAR  
151 EPGPPREPKE PFRPPPITPH EYMLSLYRTL SDADRKGGNS SVKLEAGLAN  
201 TITSFIDKGQ DDRGPVVRKQ RYVFDISALE KDGLLGAE LR ILRKKPSDTA  
251 KPAVPRSRA AQLKLSSCPS GRQPAALLDV RSVPGLDGSG WEVFDIWKL F  
301 RNFKN SAQLC LELEAWERGR TVDLRGLGFD RAARQVHEKA LFLVFGRTKK  
351 RDLFFNEIKA RSGQDDKTVY EYLFSQRRKR RAPSATRQ GK RPSKNLKARC  
401 SRKALHVNFK DMGWDDWIIA PLEYEAFHCE GLCEFPLRSH LEPTNHAVIQ  
451 TLMNSMDPES TPPTCCVPTR LSPISILFID SANNVVKQY EDMVVESCGC  
501 R



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## FIG. 39

(SEQ ID NO: 38)

### Human Growth Differentiation Factor (GDF)-8 [Myostatin]

1 MQKLQLCVYI YLFMLIVAGP VDLNENSEQK ENVEKEGLCN ACTWRQNTKS  
51 SRIEAIKIQI LSKLRLETAP NISKDVIRQL LPKAPPLREL IDQYDVQRDD  
101 SSDGSLEDDD YHATTETIIT MPTESDFLMQ VDGKPKCCFF KFSSKIQYNK  
151 VVKAQLWIYL RPVETPTTVF VQILRLIKPM KDGTRYTGIR SLKLDMPNGT  
201 GIWQSIDVKT VLQNLWKQPE SNLGIEIKAL DENGHD LAVT FPGPGEDGLN  
251 PFLEVKVTD T PKRSRRDFGL DCDEHSTESR CCRYPLTVDF EAFGWDWIIA  
301 PKRYKANYCS GECEFVFLQK YPHTHLVHQA NPRGSAGPCC TPTKMSPINM  
351 LYFNGKEQII YGKIPAMVVD RCGCS

## FIG. 40

(SEQ ID NO: 39)

### Human Growth Differentiation Factor (GDF)-9

1 MARPNKFLW FCCFAWLCFP ISLGSQASGG EAQIAASAEL ESGAMPWSLL  
51 QHIDERDRAG LLPALFKVLS VGRGGSPRLQ PDSRALHYMK KLYKTYATKE  
101 GIPKSNRSHL YNTVRLFTPC TRHKQAPGDQ VTGILPSVEL LFNLDRIITV  
151 EHLLKSVLLY NINNSVSFSS AVKVCVNLMI KEPKSSSRTL GRAPYSFTFN  
201 SQFEFGKKHK WIQIDVTSLL QPLVASNKRS IHMSINF TCM KDQLEHPSAQ  
251 NGLFNMTLVS PSLILYLNDT SAQAYHSWYS LHYKRRPSQG PDQERSLSAY  
301 PVGEEAAEDG RSSHHRHRRG QETVSSELKK PLGPASFNLS EYFRQFLLPQ  
351 NECELHDFRL SFSQLKWDNW IVAPHRYNPR YCKGDCPRAV GHRYGSPVHT  
401 MVQNIIEKL DSSVPRPSCV PAKYSPLSVL TIEPDGSIAY KEYEDMIATK  
451 CTR



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## **FIG.41**

(SEQ ID NO: 40)

### **Human Artemin (GDNF)**

1 MPGLISARGQ PLLEVLPPQA HLGALFLPEA PLGLSAQPAL WPTLAALALL  
51 SSVAEASLGS APRSPAPREG PPPVLASPAG HLPGGRTARW CSGRRARRPPP  
101 QPSRPAPPPP APPSALPRGG RAARAGGPGS RARAAGARGC RLRSQLVPVR  
151 ALGLGHRSDE LVRFRFCSGS CRRARSPHDL SLASLLGAGA LRPPPGSRPV  
201 SQPCCRPTRY EAVSFMDVNS TWRTVDRLSA TACGCLG

## **FIG.42**

(SEQ ID NO: 41)

### **Human Glial Cell Derived Factor (GDNF)**

**[Persephin]**

1 MAVGKFLGGS LLLLSLQLGQ GWGPDARGVP VADGEFSSEQ VAKAGGTWLG  
51 THRPLARLRR ALSGPCQLWS LTLSVAELGL GYASEEKVIF RYCAGSCPRG  
101 ARTQHGLALA RLQGQGRAHG GPCCRPTRYT DVAFLDDRHR WORLPOLSAA  
151 ACGCGG

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